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ABSTRACT

A survey investigated the attitudes of commuter students toward distance education. Respondents were 397 students attending Purdue University Calumet (Indiana) for at least two semesters. Results indicated that if the students had the option of taking a course at home or in a classroom, 59 percent would use the distance option; over half of these were female. Of the 30 percent definitely not interested in the distance option, a large majority of both traditional-age and older students preferred the immediate feedback in a classroom, participation in classroom discussion, ability to talk with the instructor and other students before and after class, and being in a setting focused on learning. Almost half liked the structure of being in a particular place at a particular time. When asked if receiving instruction at home could be satisfying, most said it would be so if combined with some classroom instruction; 29 percent felt receiving an entire course at home would be satisfactory, and 18 percent felt it would not be satisfactory. It is concluded that while students are interested in the distance learning option, they have some reservations. It is also suggested that attempts to make distance learning more like traditional campus-based learning would be costly. (MSE)

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Convenience *vs* Connection: Commuter Students' Views on Distance Learning

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Jean Endo
Editor
AIR Forum Publications

Convenience *vs* Connection: Commuter Students' Views on Distance Learning

Abstract

Legislators and others who are interested in cost containment see distance learning as a way to increase faculty productivity. Some educators believe that distance learning can enrich students' educational experiences and broaden access to higher education. Other educators fear that ineffective, one-way teaching will simply be beamed to more people. What do we know about the impact of the collegiate experience on students? What do students think about distance learning? What do they value about the face-to-face classroom experience? This paper describes a study that sheds light on these questions.

Introduction

This paper will explore the conflicting expectations concerning distance education which are held by various groups: legislators, policy makers, and educational leaders. It also will describe a study designed to find out from commuter students what benefits they expect from distance learning and what they value about the face-to-face classroom experience.

The Expectations

The Promises

Advances in communications and computing technologies have potential for enriching students' educational experiences. Electronic mail, for example, can enlarge students' opportunities to participate in group discussions, work on collaborative projects, and receive clarification from their instructor. The same technology also can enable faculty to "meet" with students and perform other duties from their homes or other off-campus locations.

Distance learning holds promise for increasing student access to higher education. Students in remote areas can receive instruction which previously was available only in more populated centers. Likewise, by including students from other geographical areas, institutions can "fill" classes in spite of low demand at the local level.

In the current era of cost-containment, some public officials embrace distance learning as a way of reducing the cost of state-assisted higher education. They see it as an alternative to expensive construction of the parking lots, classrooms, and laboratories necessary to serve increasing numbers of students. It has even been

suggested that eventually many college/university campuses -- particularly metropolitan and regional institutions -- will become unnecessary as students opt for the convenience of learning at home or in the workplace.

In fact, futurists are convinced that the technology which makes distance education possible will transform higher education (Dolence and Norris, 1995). They envision students picking and choosing from an array of courses that are deliverable to each learner's location. Semesters and terms no longer exist because each student begins his or her individualized learning sequence whenever he or she feels ready; naturally, the learner progresses at a pace that is comfortable for him or her. Completion occurs when the student has learned enough to apply that knowledge either in the workplace or to further learning.

This future has earthshaking ramifications for all of us in higher education -- faculty, administrators, and institutional researchers. What is the faculty role in this future? Are instructors merely independent contractors who develop courseware? Does a faculty member have any connection to and feel any responsibility for the learner's progress, or is the relationship more like that of an author and his/her reader? Does the university become a mere catalog of electronic instructional materials? If things like semesters and credit hours are abandoned as units of measurement, what's our role as institutional researchers? Do we become market researchers?

The Dangers

Increasingly, questions are being raised concerning the promise of increased productivity (Green & Gilbert, 1995; Twigg, 1995). There seems to be some evidence

from non-educational applications of technology that savings in personnel costs fall far short when compared to the size of investment. Leaders in the field warn us that an increase in productivity might not be one of the benefits of applying computing and communications technologies to the educational process.

In addition, there might be a danger that decisions to adopt these technologies will be driven more by (possibly false) hopes for cost-containment than by the search for improved educational effectiveness. Ehrman (1995) notes that ineffective, one-way teaching methods "could be made even worse by new forms of technology-based distance learning.... If institutions...broadcast...[one-way] instruction out into the void beyond the campus, outcomes are likely to deteriorate still further."

Some educators are concerned that distance learning might interfere with the student-student and student-faculty interactions that seem to be essential to student learning and development. Astin (1993) found, for example, that interactions with peers and with faculty are the most important factors in producing change and development among college students.

Clearly, how the faculty role will be defined is vitally important. Will mentoring be expected of faculty, or will they simply be subject matter experts? Will faculty feel and be able to communicate concern for student's individual development at a distance? What mechanisms will there be for faculty-student contact?

Likewise, how can student to student interaction be facilitated? Employers tell us that teamwork skills are very important in the workplace. If students never meet with each other, how can these skills be acquired? Can students develop solid relationships

with each other *via* virtual interactions? Will they feel more isolated or more "connected" than they do now?

We know that commuter students feel only a very loose affiliation with the university they attend. How can students be encouraged to identify with an institution which they only experience *via* modem?

In other words, what human values and processes need to be integrated into these new educational delivery systems in order for them to be effective? Perhaps some insight into students' preferences and reservations will help us to design distance learning strategies that preserve what students consider to be the heart and soul of their educational experience. As part of a survey on facilities, students were asked about the potential benefits of distance learning and the benefits of face-to-face classroom instruction.

It should be noted that this institution -- Purdue University Calumet -- is a mid-size, metropolitan university. It has no residence halls, and so all of the students commute. For most students the distance is not great, but severe traffic congestion makes travel to and from campus stressful and time-consuming.

Almost half of Purdue Calumet's students attend part-time, and nearly all of them are employed -- many 40 hours per week or more. In fact, employment is such a prominent factor that some of us have concluded that work -- not other universities -- is our biggest competitor.

Study Methods

Subjects

The target population was defined to include students who were likely to have had substantial exposure to the institution's facilities. Thus, students who had attended Purdue Calumet for two consecutive semesters (Fall 1993 and Spring 1994) but had not graduated, were included in the population. Survey mailings were initiated in late September, 1994.

The sample size of 600 was 67% larger than the minimum necessary for a confidence level of ± 95%. The SPSS "*sample*" command was used to randomly select the sample from the population. Valid addresses were not available for twelve of the 600 students (reducing the sample size to 588), and 397 responses were received[1]. The response rate, then, was 67.5%.

In two respects, the respondent group was not representative of the sample. Compared with the sample, respondents were:

- more likely to be female (sample = 51% female; respondents = 55% female; Chi square likelihood ratio = 6.786, *df* = 1, p = .00919)
- 3 years older (sample = 25.6 years; respondents =28.6 years; T-value = -4.29, *df* = 448.7, p < .000).

Although females and older students frequently respond to surveys at a higher rate than do younger students and males, it should be remembered that this tendency

[1] One student actively declined to participate by returning the blank survey form with a note saying that she had taken so few classes at PUC that she really didn't feel comfortable commenting on the facilities. In addition, 190 students failed to return completed survey forms prior to data analysis.

could bias the overall results. In particular, any questions on which there was a significant male/female difference or a significant difference between traditional/non-traditional age students should be interpreted with caution. For that reason, overall results are NOT reported in the results section when such differences occurred.

Data Analysis

Since most of the survey items called for categorical responses, chi-square tests were used to test the significance of differences between males/females and between traditional/non-traditional age students. T-tests were used for a question on travel time since those responses were not categorized. For all statistical tests, a probability level of .05 or less was used to identify significant differences. For questions which started with "If YES," only those records having a "yes" response to the previous question were included in the analysis.

Study Results[2]

The survey form contained the following questions on distance education. The results for each question are listed underneath each question (Figures 1 - 4.)

Question. If PUC offered a course you needed or wanted and you could receive instruction in that course either at home (through TV or videotape or computer link-up, etc.) or in a regular classroom, would you be interested in taking it at home? See Figures 1 and 2 for the results.

[2] When there were no significant differences either between male/female or between traditional/non-traditional age respondents, the responses are combined and reported for "all students" or for "students". When significant differences did occur between respondent groups, the results are reported separately for each group (e.g., "female students"; "traditional students").

Figure 1. Respondents interested in distance education.

YES, I would be interested in taking a "distance learning" class at home.

59% of all students are interested in "distance learning"

57% of these interested students are female

43% of these interested students are male

If interested, % marking item as appealing		The thing that appeals to me about "distance learning" is:
86%	39.	Being able to receive instruction whenever it's convenient
	37.	Saving travel time and transportation expense Traditional age students: **89%** Non-traditional students: **78%**
	40.	Not having to worry about car and/or weather problems Traditional age students: **84%** Non-traditional students: **75%**
78%	36.	Having the option to cover the course material more quickly
49%	41.	I like to try new things
	38.	Reducing my need for child care Non-traditional students: **31%** Traditional age students: **12%**

Figure 2. Respondents not interested in distance education.

NO, I would NOT be interested in taking a "distance learning" class at home.

30% of students are not interested in "distance learning"

If "NO", % marking item as appealing		The thing I like about going to class in a classroom is:
	46.	Being able to get immediate clarification when I don't understand something Traditional age students: **96%** Non-traditional students: **86%**
89%	44.	Being able to hear and participate in class discussions
83%	47.	Being able to talk with the instructor before and/or after class
81%	48.	Being in a setting which focuses on learning
72%	45.	Being able to talk to other students before and/or after class
46%	49.	The structure of being expected in specific places at specific times
	43.	Getting out of the house Traditional age students: **53%** Non-traditional age students: **29%**

The survey also asked students specifically about their ability to learn effectively via distance learning and whether or not they believe it would be a satisfying experience. See Figures 3 and 4 for the results.

Figure 3. Respondents' views on learning effectiveness.

Question. Assuming all the necessary technology were available to you, do you think you would be able to learn as effectively at home as you do in a classroom?

53% of students stated they could learn as effectively at home

Figure 4. Respondents' views on satisfaction.

Question. Assuming it's a good course, do you think receiving instruction at home would satisfy you?

53% YES, if it's combined with some instruction in a classroom.

29% YES, receiving instruction for an entire course at home would be satisfactory.

18% NO, I would not be satisfied with receiving any instruction at home.

Discussion

Although respondents expressed a strong interest in distance learning, they also have some reservations. In general, the flexibility and convenience of distance learning are seen as being very attractive. Nevertheless, only 29% of the respondents indicated that receiving instruction for an entire course at home would be satisfactory.

Classroom instruction was preferred by 30% of the students. These respondents especially value being able to 1) get immediate clarification when they don't understand something; 2) hear and participate in class discussions; 3) talk with the instructor before and/or after class; 4) be in a setting which focuses on learning; and 5) talk with other students before and after class.

The majority of students said that they would find a combination of at-home and classroom instruction satisfactory, and only 18% totally rejected the idea of receiving any instruction at home.

Implications

It seems clear that for students who commute and who have family and/or employment responsibilities, distance learning would present a convenient option. Nevertheless, these students have some concerns that distance education designers need to address.

Successfully dealing with these concerns will improve the acceptability of distance education to the learner, but it also will increase the cost. As Twigg (1996) indicates, "you will find that the more you replicate the traditional campus model, the more your operating costs will resemble or exceed traditional campus costs -- e.g., ... courses that rely on the same student/faculty 'contact' as traditional models.... You will save money only if you substitute one function for another function at less cost."

If the functions students most want to retain have to do with access to immediate clarification and amplification of the knowledge and skills they are attempting to learn, will an "on-line help" be an acceptable substitute? How important is it for students (particularly students who are young and/or minority and/or female) to derive some measure of motivation and inspiration from having personal contact with their instructors? Is there an acceptable substitute for this role model function?

As institutional researchers, we need to examine these questions for our particular student populations. This information can help designers of distance education on our campuses insure that those experiences will meet the needs of our students.

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